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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER 43072-0002US1
INTERNATIONAL APPLICATION NO. PCT/US2004/021472	INTERNATIONAL FILING DATE 02 JULY 2004	U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/559,157
TITLE OF INVENTION DRUG CANDIDATE SELECTION BY HYDROGEN EXCHANGE CHARACTERIZATION OF LIGAND-INDUCED RECEPTOR CONFORMATION		
APPLICANT(S) FOR DO/EO/US Mark Robert Southern; Yoshitomo Hamuro; Patrick Robert Griffin		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> <li><input type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.</li> <li><input checked="" type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.</li> <li><input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li><input type="checkbox"/> The US has been elected (Article 31).</li> <li><input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li><input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li><input type="checkbox"/> has been communicated by the International Bureau.</li> <li><input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li><input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li><input type="checkbox"/> is attached hereto.</li> <li><input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li><input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))           <ol style="list-style-type: none"> <li><input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li><input type="checkbox"/> have been communicated by the International Bureau.</li> <li><input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li><input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li><input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li><input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li><input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol>		
Items 11 to 20 below concern document(s) or information included:		
<ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li><input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li><input type="checkbox"/> A preliminary amendment.</li> <li><input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li><input type="checkbox"/> A substitute specification.</li> <li><input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li><input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</li> <li><input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li><input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> </ol>		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Page 1 of 3

EXPRESS MAIL Mailing Label Number: <i>EV278709389US</i>	CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.10
Date of Deposit: <i>6/13/06</i>	
I hereby certify that this correspondence, along with any paper referred to as being attached or enclosed, and/or fee, is being deposited with the United States Postal Service, 'EXPRESS MAIL-POST OFFICE TO ADDRESSEE' service under 37 C.F.R. 1.10, on the date indicated above, and addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450	
<i>Mark R. Hause</i> Signature of person mailing paper <i>Mark R. Hause</i> Type of print name of person	

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/559, 157	INTERNATIONAL APPLICATION NO. PCT/US2004/021472	ATTORNEY'S DOCKET NUMBER 43072-0002US1
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## 20. Other items or information:

The following fees have been submitted				CALCULATIONS	PTO USE ONLY
21. <input type="checkbox"/> Basic national fee (37 CFR 1.492(a))..... \$300				\$	
22. <input type="checkbox"/> Examination fee (37 CFR 1.492(c))				\$	
If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0 All other situations..... \$200				\$	
23. <input type="checkbox"/> Search fee (37 CFR 1.492(b)) If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB..... \$400 All other situations..... \$500				\$	
<b>TOTAL OF 21, 22 and 23 =</b>				\$	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.				\$	
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE	\$	
- 100 =	/50 =		x \$250	\$	
Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	- 20 =		x \$ 50	\$	
Independent claims	- 3 =		x \$200	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.				\$	
				<b>SUBTOTAL =</b>	\$
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				\$	
				<b>TOTAL NATIONAL FEE =</b>	\$
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
				<b>TOTAL FEES ENCLOSED =</b>	\$
				Amount to be refunded:	\$
				Amount to be charged	\$

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- a.  A check in the amount of \$ \_\_\_\_\_ to cover the above fees is enclosed.
- b.  Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c.  The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0573. A duplicate copy of this sheet is enclosed.
- d.  Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

Daniel A. Monaco  
Drinker Biddle & Reath LLP  
One Logan Square  
18th and Cherry Streets  
Philadelphia, PA 19103



SIGNATURE

Daniel A. Monaco

NAME

30,480

REGISTRATION NUMBER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
ACTING AS THE DESIGNATED/ELECTED OFFICE

In re: Patent application of: Mark Robert Southern, et al.

Application No: 10/559,157

(International Application No: PCT/US2004/021472)

Filed: (International Application: 02 July 2004 (02.07.2004))

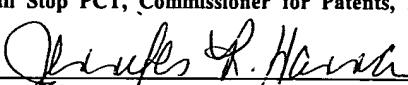
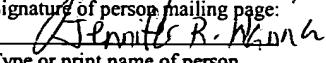
For: DRUG CANDIDATE SELECTION BY HYDROGEN EXCHANGE  
CHARACTERIZATION OF LIGAND-INDUCED RECEPTOR  
CONFORMATION

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**INFORMATION DISCLOSURE STATEMENT**

Sir:

The present application is a 35 U.S.C. § 371 of PCT/US2004/021472. Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, submitted herewith in duplicate as a substitute PTO Form 1449 listing the references cited in the Search Report in the international phase. A copy of the International Search Report is enclosed.

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.10	
EXPRESS MAIL Mailing Label Number: EV298709389US	
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I hereby certify that this correspondence, along with any paper referred to as being attached or enclosed, and/or fee, is being deposited with the United States Postal Service, "EXPRESS MAIL-POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10, on the date indicated above, and addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
 Signature of person mailing page:  Type or print name of person	

The Examiner is respectfully requested to review the items listed on the substitute PTO Form 1449 and make them of record in the instant application as required by M.P.E.P. §609. It is requested that the Examiner initial the enclosed duplicate substitute PTO Form 1449, and return one copy to the undersigned.

This Information Disclosure Statement should not be construed as a representation that the cited references are material or prior art, or that more relevant references do not exist.

This statement is being submitted before receipt of any office action on the merits. Thus, no fee is due for the filing of this paper. However, if a fee is due, please charge deposit account 50-0573.

Respectfully submitted,

MARK ROBERT SOUTHERN, *et al.*

BY 

DANIEL A. MONACO  
Registration No. 30,480  
DRINKER BIDDLE & REATH LLP  
One Logan Square  
18<sup>th</sup> and Cherry Streets  
Philadelphia, PA 19103-6996  
TEL: (215) 988-3312  
FAX: (215) 988-2757  
*Attorney for Applicants*

<b>SUBSTITUTE FORM PTO-1449</b>		<b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>	<b>ATTY. DOCKET NO.</b> <b>43072-0002US1</b>	<b>SERIAL NO.</b> <b>10/559,157</b> <b>(I.A. PCT/US2004/021472)</b>
<b>INFORMATION DISCLOSURE STATEMENT</b>		<b>APPLICANT:</b> <b>Mark Robert Southern, et al.</b>		
		<b>FILING DATE</b> <b>(I.A. July 2, 2004)</b>	<b>GROUP</b> <b>Not Yet Assigned</b>	

## **U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	AC	Smith, et al. "Probing the Non-covalent Structure of Proteins by Amide Hydrogen Exchange and Mass Spectrometry", <i>Journal of Mass Spectrometry</i> , Vol. 32, 135-146 (1997).
	AD	Marinissen, et al. "A Network of Mitogen-Activated Protein Kinases Links G Protein-Coupled Receptors to the c-jun Promoter: a Role for c-Jun NH <sub>2</sub> -Terminal Kinase, p38s, and Extracellular Signal-Regulated Kinase 5", <i>Molecular and Cellular Biology</i> , June 1999, p. 4289-4301.
	AE	Shiau, et al. "The Structural Basis of Estrogen Receptor/Coactivator Recognition and the Antagonism of This Interaction by Tamoxifen", <i>Cell</i> , Vol. 95, 927-937, December 23, 1998.

EXAMINER	DATE CONSIDERED
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**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.